The library program standards adopted by the Iowa Board of Education (Iowa Administrative Code 12.3(12)) include the following requirement: "The teacher librarian and classroom teachers will collaborate to develop, teach, and evaluate building curricular goals with emphasis on promoting inquiry and critical thinking; providing information literacy learning experiences to help students access, evaluate, use, create, and communicate information; enhancing learning and teaching through technology; and promoting literacy through reader guidance and activities that develop capable and independent readers".

Information literacy and research skills are traditionally regarded as the curriculum area of the library program. The teacher librarian has expertise in identifying and using information and technology tools. Information literacy standards and objectives provide vehicles for students to gain understandings in content areas, to practice inquiry and problem solving and to develop confidence in using a variety of technology tools and resources. The teacher librarian will take a leadership role in working with teachers to integrate information literacy goals into classroom content in all areas.

The sample curriculum that follows is intended as a starting point for districts that do not currently have an information literacy curriculum in place. Teacher librarians and teachers will want to examine this model, adapt it to local standards and initiatives and find areas where it can be integrated into various subject areas to achieve the goal of helping students become independent learners. **This is in no way intended as a stand-alone curriculum.** Rather, it spells out specific skills and content that should be a part of the local curriculum and integrated appropriately into classroom instruction, with the teacher librarian and classroom teacher sharing responsibility for designing, teaching and evaluating lessons.

This curriculum follows a commonly used method of curriculum planning which includes the following:

- 1. A **mission statement** and belief statements is defined for the curriculum area being addressed. This process helps to focus discussion and give an overall sense of the purpose of the curricular program.
- 2. National, state and other **standards** from professional groups are examined and evaluated to determine local relevance. Such standards are then revised to suit local needs and serve as the "big ideas" in developing the curriculum.
- 3. From the standards, **benchmarks** are identified that indicate specific content and skills to be gained by students at a given grade or level. Benchmarks indicate content that can be assessed at a given time. Students can be assumed to have a reasonable understanding of the benchmark so that instruction after the level of the benchmark can build upon it.

- 4. **Objectives** describe specific tasks students will be able to do to demonstrate that they have achieved the benchmarks. **Lessons** are designed around objectives and may incorporate a number of objectives.
- 5. **Assessments** measure achievement of benchmarks and objectives. Ideally, assessments are incorporated into instruction so that students receive feedback and support throughout the process, not just at the end.

The curriculum that follows provides a sample mission, belief statements, standards, benchmarks and objectives for an information literacy curriculum. There are three standards for information literacy identified in the following curriculum outline. These reflect both the old and new standards (in development) of the American Association of School Librarians, and other documents such as the *Framework for 21st Century Learning* and the *Model Core Curriculum* developed by the Iowa Department of Education. Because reading well is essential to information literacy and independent learning, **Standard 1** of the sample curriculum addresses the library's role in promoting and supporting student achievement in reading. **Standard 2** contains the recognized components of an information literacy curriculum—the ability to access, evaluate, use, create and communicate information. **Standard 3** includes essential "life skills" that can be practiced in the library including respect for diverse ideas, using information responsibly and working well with others.

Specific lessons and assessments must be developed at the local level and tailored to specific content and needs. Many districts now employ curriculum mapping to document exactly when and where various content and objectives are taught. Curriculum mapping is a valuable tool for the teacher librarian, both in documenting his/her own curriculum responsibilities and as a means of identifying areas where information skills can be integrated into specific lessons and units. A sample curriculum map appears at the end of the sample curriculum. Finally, a "planner" is included to serve as a guide as teacher librarians and teachers develop instruction to address information literacy goals.

In planning for an information literacy curriculum, consideration should be given to adopting an information problem-solving model. Such a model helps students and teachers understand that research is a process, with specific, discreet steps along the way to the goal of creating an end product. Each of the steps is an area for instruction, and assessment and support of students. The most commonly used information problem-solving model is *The Big6*TM, developed by Eisenberg and Berkowitz; this model provides an easy to follow guide to the research process. Links to this model and other commonly used models as well as useful references for planning information literacy curriculum, appear at the end of this document.

IowaTown Community School District Library and Information Literacy Framework

IowaTown District Mission Statement

The mission of the IowaTown Community School District is to prepare all students to be life-long learners, independent thinkers and productive citizens in an ever-changing society.

School Library Program Mission Statement

The mission of the school library program is to provide an inviting, dynamic learning environment and services that support and enhance teaching, literacy and learning.

To achieve this mission, the school library:

- provides all members of the learning community access to a supportive, welcoming and learner-centered environment.
- works in collaboration with teachers, administrators, support staff and parents to provide learning experiences that promote student achievement.
- fosters the development of reading, writing, speaking and listening skills and provides experiences that expand and reinforce classroom reading instruction.
- promotes life-long learning through information literacy instruction that is integrated with classroom content.
- promotes critical thinking, engagement with information in all of its forms and the use of technology to enhance learning.
- contains rich and abundant collections of materials in many formats—both print and electronic—to meet the teaching and learning needs of the school curriculum and reflect diversity and intellectual freedom principles.
- fosters connections with the larger learning community to provide students with access to learning resources and activities beyond the school walls.
- communicates library program plans, needs and accomplishments to stakeholders on a regular basis.

Sample Information Literacy Standards

Standard 1: Reads widely both for information and in pursuit of personal interests.

- Is a competent and self-motivated reader
- Reads both fiction and non-fiction fluently
- Uses a variety of reading strategies to understand non-fiction and informational text
- Develops a background in types of literature and literary elements
- Connects ideas to personal interests and previous knowledge and experience
- Applies critical thinking skills when reading, viewing and listening
- Responds to literature and other creative expressions of information in many formats

Standard 2: Uses inquiry and critical thinking skills to acquire, evaluate, use and create information.

A. The learner accesses information efficiently and effectively.

- Recognizes the need for information
- Formulates questions based on information needs
- Identifies a variety of potential sources of information
- Develops and uses successful strategies for locating information
- Uses technology effectively to locate information
- Uses a variety of print and electronic tools to find information

B. The learner evaluates information critically and competently

Determines accuracy, relevance, and comprehensiveness Distinguishes among fact, point of view, and opinion

Identifies inaccurate and misleading information

Selects information relevant to the problem or question at hand

Derives meaning from information presented in a variety of formats

The learner uses information accurately, creatively and ethically.

Organizes information for practical application

Integrates new information into current knowledge

Creates and communicates information and ideas in appropriate formats

Uses technology effectively to organize, present and document research findings

Designs, develops and evaluates information products and solutions both for school assignments and personal interests.

Reflects on strategies for revising and improving process and product

Standard 3: Seeks multiple perspectives, shares information and ideas with others and uses information and resources ethically.

- Seeks information from diverse sources, contexts, disciplines and cultures
- Respects intellectual property rights and understands the need for documenting sources
- Uses technology and resources responsibly
- Works independently and in groups to pursue information to solve problems
- Participates and collaborates as a member of a team of learners

Standards are based on *Information Power: Building Partnerships for Learning.* Chicago: American Library Association, 1998, and incorporate ideas from the revised standards of the American Association of School Librarians (in progress), *Framework for 21st Century Learning* and the *Model Core Curriculum* developed by the Iowa Department of Education and other documents. Benchmarks, objectives and other documents are based on the curriculum in use in the Iowa City Community School District and are used with permission.

Standard						
	Benchmarks	Objectives/Indicators				
Indicators Is a competent and self-motivated reader Reads both fiction and non-fiction with comprehension Uses a variety of reading strategies to understand literature Uses a variety of reading strategies to understand non-fiction and informational text Develops a background in types of literature and literary elements Connects ideas to personal interests and previous knowledge and experience Applies critical thinking skills when reading, viewing and listening Responds to literature and other creative expressions of information in many formats	PK-2 Selects a picture book to share with family Is able to check out books 3-5 Uses both text and visuals to understand literature Selects a "just right" book independently for personal reading Distinguishes between different types and elements of literature 6-12 Seeks information related to personal interests Selects literature based on interest, need and appropriateness Selects books and other materials independently for classroom assignments and personal interests.	 K-5 Applies guidelines for choosing a "just right book" during literature selection Reads or listens to traditional world literature/folklore (nursery rhymes, fairy tales, trickster tales, fables, tall tales, legends, myths) Reads or listens to types of fiction in picture book and novel format (realistic fiction, historical fiction, fantasy, science fiction) Reads or listens to nonfiction (biography, information books, poetry) Identifies literary elements of plot, character, setting, theme, point of view Increases understanding of literature by participating in discussion (opinions & responses, compare/contrast, inferences, predictions) Reads or listens to a variety of authors and illustrators Engages in an in-depth study of an author's and/or illustrator's body of work Reads or listens to award-winning literature (lowa Children's Choice, Coretta Scott King, Caldecott, Newbery, Robert F. Sibert Informational Book Award) Responds to literature by participating in a variety of activities such as storytelling, drama, puppetry, finger plays, songs, poetry, reader's theater or visual arts Identifies a variety of formats (magazines, books, non-print, electronic resources, newspapers) 6-12 Reads for pleasure, to learn and to solve information needs Seeks answers to questions Explores topics of interest Is acquainted with award-winning literature and award lists (lowa Teen award, Iowa High School Book Award, Newbery). Uses libraries, library resources, the Internet, and other information sources Independently reads a significant number of books each year 				

Sample Information Literacy Curriculum Framework				
I				

Standard	Benchmarks	Objectives/Indicators			
Standard 2: Uses inquiry and critical thinking skills to acquire, evaluate, use and create information. I. Accesses information efficiently and effectively.	 PK-2 Understands basic organizational pattern of library Locates parts of a book 	 PK-2 Defines difference between fiction and nonfiction Recognizes call number and begins to understand grouping of materials call number Asks a question about finding a book Identifies author, title, title page, illustrator, cover, spine 			
 Indicators Recognizes the need for information Formulates questions based on information needs Identifies a variety of potential sources of information Develops and uses successful strategies for locating information Uses a variety of print and electronic tools to find 	 Explains an information need Understands the concept of keywords Demonstrates skill in using electronic catalog Locates materials on library shelves by call number Uses print and electronic sources to access, extract and process information 	 Asks a question about finding a book or locating information Uses dictionary, encyclopedia, atlas Identifies author, title, title page, illustrator, cover, spine, publisher, copyright date Uses strategies to identify appropriate keywords Uses the electronic library catalog to search by keyword, author, title Locates materials on library shelves by call number Uses basic online information tools (Ebsco, encyclopedia) Begins to understand that information can be found in a variety of sources and recognizes the unique features of each Uses table of contents, index and glossary to find information within sources Begins to understand visual literacy clues 			
information	Understands scope, depth and potential usefulness of a variety of available information resources Uses search and navigational features of print and electronic sources to efficiently access information	 Articulates an information need Formulates questions to refine an information need Generates appropriate keywords to use as access points in a search Is aware of the unique features of various resources Demonstrates skill using the electronic library catalog Locates library materials on the shelf by call number Searches online databases and the Internet effectively Navigates within print and electronic resources to locate and access information 9-12 			

 	Sample information Literacy Curriculum Framewor
Understands scope, depth and potential usefulness of more advanced, sophisticated and diverse resources Develops and executes successful strategies to efficiently and effectively access information	 Articulates an information need Formulates questions to refine an information need Develops purpose or thesis statement Identifies potential sources of information, both within library and beyond the school walls Identifies and uses various strategies and techniques to execute and refine successful searches Navigates within print and electronic resources effectively and independently

Standard	Benchmarks	Objectives/Indicators
II. Evaluates information critically and competently.	PK-2	PK-2
. ,	3-5	3-5
 Indicators Determines accuracy, relevance, and comprehensiveness Distinguishes among fact, point of view, and opinion Identifies inaccurate and misleading information Selects information relevant to the problem or question at hand Derives meaning from information presented in a variety of formats 	 Differentiates between fact and fiction Identifies appropriate and relevant sources of information Identifies appropriate and relevant information within sources Evaluates search process 	 Uses headings, subheadings, table of contents, index Identifies the appropriate use of reference materials, e.g. encyclopedia, atlas, non-fiction book Determines authenticity and relevance of print and non-print information Applies evaluation criteria to Internet sites and other information sources Identifies and extracts relevant information in print and electronic resource Develops notetaking skills Selects appropriate resources from a list of "hits" obtained in an

		electronic catalog search and on the Internet
		Uses conventions of the source to determine usefulness
	6-8	6-8
	 Examines and evaluates information 	Reads, views, listens to information critically and competently
	 Extracts relevant and essential information from sources 	Applies evaluative criteria to determine the usefulness of the information: relevancy, suitability, authority, objectivity, currency
		Identifies information relevant and essential to the information need
		Uses paraphrasing, notetaking and other strategies to record results of information searching
	 9-12 Examines and evaluates information Extracts relevant and essential information from sources 	 P-12 Reads, views, listens to information critically Applies evaluative criteria to determine the relative value of the information: relevancy, suitability, authority, objectivity, currency Identifies information relevant and essential to the information need Uses paraphrasing, highlighting or other extraction techniques or strategies to identify and record relevant information Compares and contrasts information from various sources

	Standard	Benchmarks	Objectives/Indicators			
Ш.	II. Uses information accurately, creatively and ethically. PK-2		PK-2			
	•	3-5	3-5			
•	Indicators Organizes information for practical application Integrates new information into current knowledge Creates and communicates information and ideas in appropriate formats Uses technology effectively to	Communicates results of information search in format appropriate for content	 Edits, formats, spell checks, saves, proofreads, and prints original documents using a word processor Organizes information using such techniques as graphic organizers, storyboarding or webbing Creates products using multimedia techniques Presents the results of information search in a new form Presents, performs or shares a product successfully Evaluates projects 			
	organize and present research	6-8				
	findings		6-8			

- Designs, develops and evaluates information products and solutions both for school assignments and personal interests.
- Reflects on strategies for revising and improving process and product
- Organizes and synthesizes information from multiple sources
- Creates and effectively communicates information and ideas to others

9-12

- Organizes and synthesizes information from multiple sources
- Creates and effectively communicates information and ideas to others

- Organizes information from multiple sources in a logical sequence using a graphic organizer
- Selects an appropriate format for communicating ideas
- Develops a storyboard
- Uses a variety of technology tools to create products
- Uses writing and speaking skills to present information
- Presents, performs or shares information and ideas successfully
- Evaluates product or presentation

9-12

- Analyzes information and identifies topics, subtopics and relationships
- Organizes information in a logical sequence
- Selects an appropriate format for communicating ideas
- Develops a formal outline or storyboard
- Revises and refines as necessary
- Creates a product that clearly expresses ideas
- Uses appropriate resources and technology skillfully in creating products
- Uses writing and speaking skills to present information
- Presents, performs or shares information and ideas successfully
- Evaluates product or presentation

Standard	Benchmarks	Objectives/Indicators
Standard 3: Seeks multiple perspectives, shares information and ideas with others and uses information and resources ethically. Indicators Seeks information from diverse	 PK-2 Listens attentively Takes part in discussions Works cooperatively with others Respects library facility, resources and policies 	 PK-2 Listens to others Works cooperatively in large and small groups Respects library rules and procedures Participates in discussions about literature Answers research questions with words and phrases Uses technology carefully
sources, contexts, disciplines and cultures Respects intellectual property rights and understands the need for documenting sources Uses technology and resources responsibly Works independently and in groups to pursue information to solve problems Participates and collaborates as	 3-5 Uses library materials and technology responsibly Understands the need for citing sources of information (copyright) Respects others' ideas and backgrounds and acknowledges their contributions 	 3-5 Answers research questions by paraphrasing Understands that authors and illustrators own their work Recognizes the need for citing sources and prepares bibliographies Follows Internet safety rules and guidelines as defined in district policy Practices responsible use of library materials and technology Respects different points of view and opinions Works collaboratively on projects Uses a number of sources for research projects
a member of a team of learners	 Understands the concept of plagiarism and cites sources properly Uses library materials, computers and other equipment productively, responsibly, and independently. Works effectively in groups 	 6-8 Observes copyright guidelines Cites sources in a properly formatted bibliography Practices responsible use of library materials and technology Follows Internet safety rules and guidelines as defined in district policy Respects different points of view and opinions
	 9-12 Understands and respects district policy on legal and ethical use of information Uses library materials, computers and other equipment productively, responsibly, and independently Works effectively in groups Seeks diverse sources and multiple 	 Works collaboratively on projects Uses a variety of sources for research projects 9-12 Paraphrases and uses conventions of quoting properly Observes copyright guidelines Cites sources in a properly formatted bibliography Respects intellectual freedom and recognizes various viewpoints Works collaboratively with others to do research and prepare presentations is a competent and self-directed researcher

points of view

Sample Integrated Information Literacy/Science Curriculum Map: Grade 7

September/October

Science Standard 1: Develop questions that help construct meaning about the natural world.

Information Literacy Standard 2: Uses inquiry and critical thinking skills to acquire, evaluate, use and create information.

	Studying People Scientifically					
Essential questions	 How is scientific problem solving different than other problem-solving strategies? What are the essential elements of a scientific design? How are people studied scientifically? 					
Content	 Models of problem solving Elements of scientific problem-solving (collecting evidence, placebos, variables, threshold, control, sample size) Clinical trials Qualitative vs. quantitative data Reproducibility of experimental procedures Information Problem-Solving Model Demonstration of online periodical index Criteria for evaluating information Identify tradeoffs involved in studying people scientifically Evaluate proposals for clinical trials Describe the important elements of scientific design Differentiate between qualitative and quantitative data Design and conduct a simple investigation Repeat an experiment designed by another student 					
Assessment	 Analysis questions Evaluation of clinical trials Experimental design (Act. #9 & 10) Exam Research Guide Assessment Tool Evaluating Search Results Activity Notetaking Rubrics Citation of sources worksheet 					
Science Benchmarks	Generate scientific questions about the world based on observations and experiences Design and conduct simple investigations Develop strategies and skills for information gathering and problem solving					
Information Literacy Benchmarks	Extract relevant and essential information from sources.					

Integrated Lesson Planner

Today's Date	Date of Unit
Department	Course
Teacher	Unit
Period(s)	Number of Students
Project Due Date	

	Monday		Tuesday	V	Vednesday		Thursday		Friday
									1
Unit	Overview/C	ontor	nt Objectives	I					
OHII	. Ovel view/C	onitei	ii Objectives	-					
	-								
Fnd	Product								
LIIU									
Asse	essments								
Assessments									

Preparation (facility, schedule, resources, equipment, etc.)
Notes
Things to consider next year

InfoLit Model	Research Tools	Production Tools	Library Standards
θ 1 define info need	θ Lib Cat	θ Word	θ 1. reading
θ 2 locate info	θ Almanac	θ Desktop Pub	θ 2A. access
θ 3 process info	θ Print Encyclopedia	θ Excel	θ 2B. evaluate
heta 4 create/communicate	heta World Book Online	θ PowerPoint	heta 2C. use /create info
θ 5 assess	θ EBSCO	θ Scanner	heta 3. personal/ ethical
	θ SIRS	θ Video	
θ 6 literature	θ Web Search Engines	θ Audio	
		heta Web	

Benchmarks/Objectives						
θ	info need	θ	catalog	θ	bibliographic citation	
θ	question / thesis	θ	print / electronic reference	θ	graphic organizer	
θ	possible sources	θ	electronic indexes	θ	outlining	
θ	keywords	θ	internet	θ	creates product	
θ	search strategies / techniques	θ	evaluates information	θ	lit selection	
θ	operators	θ	notetaking techniques	θ	ethical use	
θ	navigation technique	θ	other extraction techniques			

Useful Resources for Information Literacy Curriculum Development

Information Problem Solving Models

The following represent several different approaches to teaching the information searching process. Districts will want to examine each and choose that which best fits their own research methods.

Eisenberg, Michael and Robert Berkowitz. The Big6. http://big6.com/

Kuhlthau, Carol Collier. Information Search Process Model. Rutgers University.

http://library.humboldt.edu/ic/general_competency/kuhlthau.html

McKenzie, Jamie. Research Cycle. http://questioning.org/rcycle.html

Pappas, Marjorie and Ann Tepe. Pathways to Knowledge. © 2000 Follett Software Company. http://www.sparkfactor.com/clients/follett/home.htm

To explore additional models: http://virtualinguiry.com/inquiry/models.htm

Developing Curriculum

Donham, Jean, et. al. 2001. *Inquiry-Based Learning: Lessons from Library Power*. Worthington: OH: Linworth

Harada, Violet H. and Joan M. Yoshima. 2004. *Inquiry Learning through Librarian-Teacher Partnerships*. Worthington, OH: Linworth Publishing Co.

Information Power: Building Partnerships for Learning. 1998. Chicago: American Association of School Librarians (revision in progress).

Keeling, Joyce. (2005) Lesson Plans for the Busy Librarian: A Standards Based Approach for the Elementary Library Media Center. Teacher Ideas Press, an imprint of Libraries Unlimited.

Langhorne, Mary Jo, ed. 2004. Iowa City Community School District. *Developing An Information Literacy Program K-12.* New York: Neal Schuman.

Model Core Curriculum. 2006. Iowa Department of Education.

http://www.iowa.gov/educate/content/view/674/1001/

Ryan, Jenny, and Steph Capra. 2001. *Information Literacy Toolkit: Grades Kindergarten-6*. Chicago: American Library Association.

Ryan, Jenny, and Steph Capra. 2001. *Information Literacy Toolkit: Grades 7 and Up.* Chicago: American Library Association.

Stripling, Barbara K. and Sandra Hughes-Hassell. 2003. *Curriculum Connections Through The Library*. Worthington, OH: Libraries Unlimited.

Wiggins, Grant and Jay McTighe. 2001. Understanding By Design. Upper Saddle River, NJ: Prentice Hall.

Reading and Literacy

Bush, Gail. 2005. *Every Student Reads: Collaboration and Reading to Learn*. Chicago: American Library Association.

Harvey, Stephanie. 1998. *Nonfiction Matters*. Portland, ME: Stenhouse Publishers.

Harvey, Stephanie and Anne Goudvis. 2000. *Strategies That Work: Teaching Comprehension to Enhance Understanding*. Portland, ME: Stenhouse Publishers.

Moreillon. Judi. 2007. *Collaborative Strategies for Teaching Reading Comprehension:*Maximizing Your Impact. Chicago: American Library association.

Walker, Christine and Sarah Shar. 2004. *Teaching Reading Strategies in the School Library.* Westport, CT: Libraries Unlimited.

Sample Integrated Lessons

Cybersmart. K-8 curriculum is organized in 5 units, each teaching a facet of Internet use www.cybersmartcurriculum.org/lesson_plans

- **Educator's Reference Desk** Over 2000 lesson plans with a small information literacy section and extensive language arts section http://www.eduref.org/Virtual/Lessons/index.shtml Search
- **Library of Congress/American Memory**. Focuses on the integration of primary sources in instruction. lcweb2.loc.gov/ammem/ndlpedu/lessons/index.html
- **Read Write Think.** International Reading Association and the National Council of Teachers of English. http://www.readwritethink.org/index.asp
- **S.C.O.R.E.** Web-based classroom resources in history, math, language arts, and social studies from Schools of California, K-12. http://www.score.k12.ca.us/
- **S.O.S.** for Information Literacy is a dynamic web-based multimedia resource that includes lesson plans, handouts, presentations, videos and other resources to enhance the teaching of information literacy. http://www.informationliteracy.org/
- 21st Century Literacies The Information Literacies Curriculum. Lessons and strategies for embedding information literacy across the curriculum.
 http://www.kn.pacbell.com/wired/21stcent/information.html
- Using the Internet to Support Literacy, Information Literacy, and Technology Literacy in K-12 Schools. 2004. SunLink Project, University of Central Florida. http://www.kn.pacbell.com/wired/21stcent/index.html
- Valenza, Joyce. Springfield Township High School Virtual Library. http://www.sdst.org/shs/library/jvles.html
- **Verizon/Thinkfinity.** The Teacher Resources/Lesson Plan Index allows you to search by subject, content partner, grade band, and resource type in all subject areas. The index currently includes 3, 539 lesson plans. www.thinkfinity.org

Special thanks to Janie Schomberg and Kay Rewerts for providing links to high-quality online resources.